IN THE CLAIMS

1. (currently amended) An optical device, comprising:

a fixed reference;

a first standardized optical module having a first optical component prealigned relative to a reference frame provided by a reference standard, the first optical module mounted to a first predetermined location on the fixed reference; and

a second standardized optical module having second optical component prealigned relative to athe reference frame provided by the reference standard, the second optical module mounted to a second predetermined location on the fixed reference;

wherein the first and second optical modules are ~~oriented~~prealigned relative to the reference frame provided by the reference standard and mounted at the first and second predetermined locations ~~to~~such that the optical components optically interact with one another in a desired manner.

2. (original) The optical device of claim 1 wherein the first and second optical modules carry reference features and the prealignment is with respect to the reference features.

3. (original) The optical device of claims 1 or 2 wherein the fixed reference carries reference features at the first and second predetermined locations.

4. (original) The optical device of claim 1 wherein the first optical module comprises:

a first prealignment mount; and

the first optical component is mounted in the first prealignment mount.

5. (original) The optical device of claim 4 wherein the second optical module comprises:

a second prealignment mount; and

the second optical component mounted in the second prealignment mount.

6. (original) The optical device of claim 4 wherein the first optical component is fixed at a prealigned orientation by the first prealignment mount.

7. (original) The optical device of claim 6 wherein the first optical component can move with six degrees of freedom relative to reference features prior to being fixed to the first prealignment mount.

8. (original) The optical device of claim 4 including a prealignment mount coupling adapted to fixedly couple the first optical component to the first prealignment mount at a prealigned orientation.

9. (original) The optical device of claim 1 including a first fixed reference coupling to fixedly couple the first optical module to the fixed reference.

10. (currently amended) An optical device, comprising:

a fixed reference;

a first standardized optical module comprising:

a first optical component;

a first prealignment mount;

a first fixed reference coupling which fixedly

couples the prealignment mount to a predetermined location on the fixed reference;

a first prealignment mount coupling which fixedly couples the first optical component to the first prealignment mount at a prealigned orientation relative to a reference frame of a reference standard and the fixed reference coupling;

a second standardized optical module comprising:

a second optical component;

a second prealignment mount;

a fixed reference coupling which fixedly couples the prealignment mount to a predetermined location on the fixed reference;

a second prealignment mount coupling which fixedly couples the second optical component to the second prealignment mount at a prealigned orientation relative to the reference frame of the reference standard and to the fixed reference coupling;

wherein the first and second optical components are oriented in the reference frame to optically interact with one another in a desired manner.

11. (original) The optical device of claim 10 wherein the first and second fixed reference coupling include reference features.

12. (original) The optical device of claims 10 or 11 wherein the fixed reference includes reference features at the first and second predetermined locations.

13. (original) The optical device of claim 10 wherein the first optical component can move with six degrees of freedom prior to being fixed by the first prealignment mount coupling.

14. (currently amended) A method of manufacturing an optical device, comprising:

obtaining a fixed reference;

obtaining a first standardized prealigned optical module having a first optical component prealigned with a reference frame provided by a reference standard;

obtaining a second standardized prealigned optical module having a second optical component prealigned with the reference frame of the reference standard; and

fixedly mounting the first and second optical modules at predetermined locations on the fixed reference wherein the first and second optical devices are positioned to optically interact with each other in a desired manner due to their prealignment with the reference frame of the reference standard.

15. (original) The method of claim 14 including placing the first and second prealigned optical modules at predetermined locations on the fixed reference prior to fixedly mounting.

16. (original) The method of claim 14 including prealigning the first and second optical modules prior to fixedly mounting.

17. (original) The method of claim 16 wherein prealigning the first and second optical modules comprises aligning the modules in a reference frame defined by the reference standard.

18. (original) The method of claim 17 wherein prealigning comprises fixing the first and second optical components in prealignment mounts, respectively.

19. (original) The method of claim 16 wherein prealigning includes compensating for optical variations in the optical components.

20. (original) The method of claim 19 including:

obtaining a third prealigned optical module having a third optical component prealigned with the reference standard; and

fixedly mounting the third prealigned optical module at a predetermined location on the fixed reference wherein the third optical module is positioned to optically interact in a desired manner with at least one of the first and second optical modules.

21. (original) An optical device manufactured in accordance with claim 14.

22. (original) Computer software configured to implement the method of claim 14.